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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/716,337	11/18/2003	John McMillan	1015.1001	7593

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EXAMINER

HOANG, PHUONG N

ART UNIT	PAPER NUMBER
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2194

MAIL DATE	DELIVERY MODE
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10/05/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/716,337

Applicant(s)

MCMILLAN ET AL.

Examiner

Phuong N. Hoang

Art Unit

2194

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 July 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 - 11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 - 11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.


WILLIAM THOMSON
SUPERVISORY PATENT EXAMINER

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 8/2/07.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1 – 15 are pending for examination.
2. This office action is in response to amendment filed 7/9/07.

Specification

3. The use of the trademark ("Windows.RTM", 0017) has been noted in this application. It should be capitalized wherever it appears and be accompanied by the generic terminology.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

Claim Rejections - 35 USC § 101

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. Claims 1 – 15 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

6. Claims 1 – 15 are directed to a computing architecture comprising operating system, file system, registry, software per se.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. **Claims 1 – 3, 5 – 6, 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Hall et. al., “A Virtual Operating System” pages 495 – 502.**

9. **As to claim 1**, Hall teaches a computing architecture, comprising:

a base operating system (OS) (single real operating system, page 495 col. 3, page 496 col. 2); and

10. at least one virtual OS environment within the base OS (a single real operating system can support many virtual operating systems, p. 496 col. 2), the virtual OS environment having a file system (file systems, p. 497 col. 1 section 4) and registry (inherent for OS) and which is independent of the base OS (the virtual operating system is independent/parallel with existing real operation system, sections 4 and 5.2).

11. **As to claim 2**, Hall teaches wherein the base OS is Windows.RTM or is Windows.RTM.-compatible (Unix operating system, p. 497 col. 3).

12. **As to claim 3**, Hall teaches at least one application (program, p. 496 col. 2 and 3) running under the virtual OS environment, and wherein the application shares one or more of the following with the base OS: networking information, user login rights, services, hardware information (hardware, p. 497 col. 1), and clipboard information.

13. **As to claim 5**, Hall teaches wherein each virtual OS environment contains a group of installed applications (programs such as text editors and file systems, p. 497 section 4) that run independently of each another.

14. **As to claim 6**, Hall teaches one or more applications (programs portable to virtual OS so the system offer in parallel, p. 497 section 4) running under the base OS and each virtual OS environment, and wherein all of the applications run on a single OS desktop.

15. **As to claim 8**, this is the method claim of claim 1. See rejection for claim 1 above.

Claim Rejections - 35 USC § 103

16. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

17. **Claims 4, 7, 9 – 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hall et. al., “A Virtual Operating System” pages 495 – 502 in view of Krishma, US patent no. 6,141,698.**

18. **As to claim 4**, Hall teaches multiple virtual OS (one single real OS can support many virtual operating systems, p. 496 col. 2) supports environments within a single operating system (OS).

Hall does not explicitly teach a change made in one of the virtual OS. However, Hall teaches the virtual OS is independent from the real OS (p. 497 section 4).

Krishma teaches a change made in the OS (inject dll, abstract, figures 2, 3, and 6), wherein the change does not affect the main OS or any other virtual OS environment (by inject dll not modifying the current code of any operating systems).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teaching of Hall and Krishma's system because

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Krishma's injecting dll to the virtual OS would change the execution, but no need to modify the code of the operating system, and therefore, it the maintenance of application is easier.

19. **As to claim 7**, see rejection for claim 4 above.

20. **As to claims 9 - 11**, Krishman teaches installing at least one application program under the virtual OS environment; and wherein attempts to access the base OS file system and registry locations are instead redirected to the virtual OS environment file system or registry (inject dll, abstract, figures 2, 3, and 6).

21. **As to claim 12**, Krishman teaches creating a copy of base OS file system (col. 4 lines 55 – col. 5 lines 5) and registry in the virtual OS environment file system and registry locations.

22. **As to claim 13**, Krishman teaches an application running under the virtual OS environment is executed using the copy in the virtual OS environment file system (col. 4 lines 55 – col. 5 lines 5).

23. **As to claims 14 - 15**, it would have been obvious to one of ordinary skill in the art at the time the invention was made to recognize that the injecting DLL method and techniques can be applied to different computing environment because the injecting DLL is portable and convenient to attach anywhere in the application as designed to redirect the execution without being modified the existing code.

Response to Arguments

24. Applicant's arguments filed 7/9/07 have been fully considered but they are not persuasive.

25. Applicant amended the "computing machine having a" to direct to hardware.

In response, the body of the claim does not comprise any hardware to execute the computing machine claimed in the pre-amble.

26. Applicant argued that Hall merely create source code for a virtual operating system, Hall does not include any teaching of "file systems" are part of the virtual OS environment of the file systems are independent of a base OS file system.

In response, Hall teaches the virtual OS environment having the file systems (files systems, section 4 col. 1) and registry (inherent to maintain configuration information for the operating system) are independent of a base OS file system (the virtual operating system is independent/parallel with existing real operation system, sections 4 and 5.2). Further, once the virtual operating system is independent with the

based OS, the registry of used by the virtual operating system has to be independent with the based OS too.

27. Applicant argued that Hall failed to teach at least of virtual OS environment within the base OS.

In response, as response above in section 25, Hall teaches at least of virtual OS environment within the base OS (a single real operating system can support many virtual operating systems (p. 496 col. 2)).

28. Applicant argued to claims 4, 7, 9 – 11 that Hall and Krishman do not teach “installing at least on application under the virtual OS environment” and “attempts to access the base OS Redirected to the virtual OS.

In response, first, examiner could not find any where in the claims the limitation installing at least one application program under the virtual OS environment. In fact, claim 5 include limitation “OS environment contains a group of installed application” means different than “installing at least one application program under the virtual OS environment” as argued.

29. Secondly, it is the combination of Hall and Krishman, not any alone, teaches the whole claimed limitations, Hall teaches multiple virtual OS (one single real OS can support many virtual operating systems, p. 496 col. 2) supports environments within a single operating system (OS). Hall does not explicitly teach a change made in one of the virtual OS. However, Hall teaches the virtual OS is independent from the real OS (p. 497 section 4). Krishma teaches a change made in the OS (inject dll, abstract,

figures 2, 3, and 6), wherein the change does not affect the main OS or any other virtual OS environment (by inject dll not modifying the current code of any operating systems).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teaching of Hall and Krishma's system because Krishma's injecting dll to the virtual OS would change the execution, but no need to modify the code of the operating system, and therefore, it the maintenance of application is easier.

30. The new claims have been amended and rejected. See the rejection above.

Conclusion

31. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

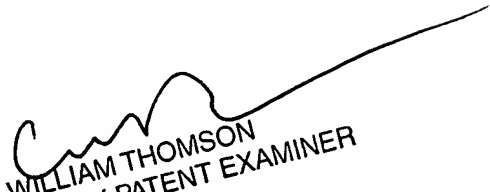
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

32. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phuong N. Hoang whose telephone number is (571)272-3763. The examiner can normally be reached on Monday - Friday 9:00 am to 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Thomson can be reached on 571-272-3718. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Ph
September 28, 2007


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SUPERVISORY PATENT EXAMINER